

AMENDMENTS TO THE CLAIMS

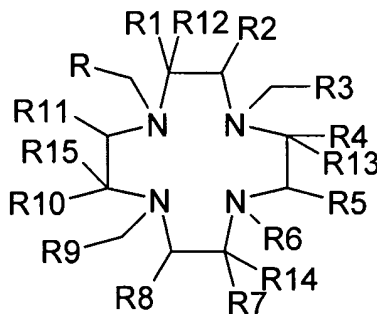
This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

Claims 1-23 (cancelled)

24. (New) A compound comprising a polyazamacrocyclic compound and at least one phosphonic group substituted on at least one of the aza groups of said polyazamacrocyclic compound or a salt form thereof.

25. (New) The compound of claim 24 wherein said polyazamacrocyclic compound comprises the general formula (II):



(II)

where $R^1 = R^2 = R^7 = R^8 = R^{10} = R^{11} = H$;

R^{12} , R^{13} , R^{14} , and $R^{15} = CH_3$ or H ;

$R^4 = R^5$; and $R^{10} = R^{11}$ can be H or groups taken together forming a cyclic

C_3 - C_4 alkene group;

$R^6 = X$, where $X = CH_2P(O)(OH)_2$, $CH_2P(O)(OC_4H_9-t)_2$, $CH_3CHP(O)$

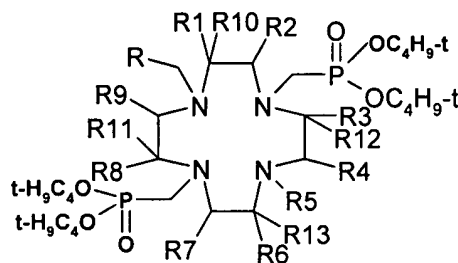
$(OH)_2$, $CHP(O)(OH)_2-(CH_2)_nCO_2H$, $CHP(O)(OH)_2$,

$(\text{CH}_2)_n\text{NH}_2$, $\text{CH P (O) (OH)}_2\text{-Aryl-CO}_2\text{H}$, $\text{CH P (O) (OH)}_2\text{-Aryl-NH}_2$ or $\text{CH P (O) (OH)}_2\text{-Aryl-NHCS}$, where $n = 1-12$; and

R , R^3 , or R^9 is $\text{CO}_2\text{C (CH)}_3$, or CO_2H ;

or a salt form thereof.

26. (New) The compound of claim 24 wherein said polyazamacrocyclic compound comprises the general formula (IV):



(IV)

where $\text{R}^1 = \text{R}^2 = \text{R}^3 = \text{R}^4 = \text{R}^6 = \text{R}^7 = \text{R}^8 = \text{R}^9 = \text{H}$;

$\text{R}^3 = \text{R}^4$ and $\text{R}^8 = \text{R}^9$ can be H or groups taken together forming a cyclic $\text{C}_3\text{-C}_4$ alkene group;

R^{10} , R^{11} , R^{12} and $\text{R}^{13} = \text{CH}_3$ or H;

$\text{R} = \text{CO}_2\text{C(CH}_3)_3$; and

$\text{R}^5 = \text{CH}_2\text{P (O) (OH)}_2$, $\text{CH}_2\text{P (O) (OC}_4\text{H}_9\text{-t)}_2$, $\text{CH}_3\text{CH P (O) (OH)}_2$, $\text{CH P (O) (OH)}_2\text{-(CH}_2)_n\text{CO}_2\text{H}$, $\text{CH P (O) (OH)}_2\text{-Aryl-CO}_2\text{H}$, $\text{CH P (O) (OH)}_2\text{-Aryl-NH}_2$ or $\text{CH P (O) (OH)}_2\text{-Aryl-NHCS}$, where $n = 1-12$;

or a salt form thereof.

27. (New) A compound of the formula:

10-Phosphonomethyl-1,4,7,10-tetraazacyclododecane-1,4,7-triacetic acid

(MPDO3A);

10-(1-phosphonoethyl)-1, 4, 7, 10-tetraazacyclododecane-1, 4, 7-triacetic

acid;

10-[[Bis(1,1-dimethylethoxy)phosphinyl]methyl]-1,4,7,10-

tetraazacyclododecane-1,4,7-triacetic acid 1,7-bis(1,1-

dimethylethyl)ester;

10-[[Bis(1,1-dimethylethoxy)phosphinyl]methyl]- α' -(carboxymethyl)-

1,4,7,10-tetraazacyclododecane-1,4,7-triacetic acid $\alpha, \alpha', \alpha''$ -

tris(1,1-dimethylethyl)ester;

10-[[1-[Bis(1,1-dimethylethoxy)phosphinyl]-3-carboxy]propyl]-1,4,7,10-

tetraazacyclododecane-1,4,7-triacetic $\alpha, \alpha', \alpha''$ -tris(1,1-

dimethylethyl)ester; or

4,10-Bis[[bis(1,1-dimethylethoxy)phosphinyl]methyl]-1,4,7,10-

tetraazacyclododecane-1,7-diacetic (1,1-dimethylethyl)ester;

or a salt form thereof.

28. (New) A compound comprising a homo dimer, hetero dimer, homo multimer or hetero multimer of the compound of any of claims 24-27.

29. (New) A complex comprising the compound of any of claims 24-27 complexed with a paramagnetic or radionuclide metal or a salt form thereof.

30. (New) A method for preparing a complex comprising the step of conjugating the compound of any of claims 24-27 with a paramagnetic or radionuclide metal.

31. (New) A method of imaging comprising the steps of:

administering to a patient a diagnostic imaging agent comprising the compound of any of claims 24-27 complexed with a paramagnetic or radionuclide metal, and

imaging said patient.

32. (New) A method for preparing a diagnostic imaging agent comprising the step of adding to an injectable medium a substance comprising the compound of any of claims 24-27.

33. (New) A kit for preparing a diagnostic imaging agent comprising the compound of any of claims 24-27.

34. (New) A kit for preparing a radiotherapeutic agent comprising the compound of any of claims 24-27.

35. (New) A method of treating a patient comprising the step of administering to a patient a radiotherapeutic agent comprising the compound of any of claims 24-27 complexed with a therapeutic radionuclide.

36. (New) A method of preparing a radiotherapeutic agent comprising the step of adding to an injectable therapeutic medium a substance comprising at least one compound of any of claims 24-27.

37. (New) The compound of any of claims 24-27 further comprising a linking group, a targeting moiety, a diagnostic moiety and/or a therapeutic moiety.

38. (New) The complex of claim 29 further comprising a linking group, a targeting moiety, a diagnostic moiety and/or a therapeutic moiety.

39. (New) A method for preparing a polyazamacrocyclic compound bound to a linker, targeting moiety, diagnostic moiety or therapeutic moiety comprising the step of:

conjugating a polyazamacrocyclic compound to a linker, targeting moiety, diagnostic moiety or therapeutic moiety with a coupling agent, wherein:

said coupling agent is selected from the group consisting of DCC, HOBT and HATU,

said polyazamacrocyclic compound comprises one carboxyl group and/or at least one amino group, and

said linker, targeting moiety, diagnostic moiety or therapeutic moiety comprises at least one amino or acid functional group.